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ON THE POSSIBILITY OF EXTRACTING ELECTRONS FROM THE BEAM HALO USING BENT CRYSTALS AT DESY

Wednesday, January 14, 2026 2:10 PM (30 minutes)

Based on numerical simulations of 6 GeV electron propagation through bent crystals with various orientations relative to the incident particle direction, as well as different bending radii and crystal thicknesses, we performed a comparative analysis of the deflection efficiency in planar and axial crystal orientations. To identify the optimal bent crystal parameters for maximum electron deflection efficiency, we compared the effectiveness of planar channeling in bent crystals with that of the Grinenko-Shul'ga mechanism, which is associated with particle deflection in the fields of atomic strings within a bent crystal.

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